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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,456	02/28/2002	Toshiaki Kobayashi		4972

7590 01/05/2004
LORUSSO & LOUD
3137 Mt. Vernon Avenue
Alexandria, VA 22305

EXAMINER

PENG, KUO LIANG

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,456

Applicant(s)

KOBAYASHI ET AL.

Examiner

Kuo-Liang Peng

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/16/03 Amendment.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6, 7 and 9-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-21 is/are allowed.
- 6) ☒ Claim(s) 6, 7 and 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The Applicants' amendment filed on September 16, 2003 was received. Claims 1-5 and 8 are deleted. Claim 6 is amended. Claims 11-21 are added. The non-final rejection is made because of the newly found reference, Sun (US 5 650 485).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6-7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zank (US 6 252 030) in view of Merriam-Webster (Merriam-Webster's Collegiate Dictionary, 10th Ed., (1993)), Ishida (US 6 271 297) and Sun (US 5 650 485).

With respect to Claim 6, Zank discloses a molding prepared from a hydrosilylated polymer obtained by reacting a hydridosilsesquioxane compound having a structure of formula 1 with a divinylsiloxane compound having a structure of formula 2 (col. 3, lines 31-63 and col. 4, lines 6-29).

The difference between Zank and the present invention is the requirement of a) molding the hydrosilylated polymer in a mold cavity; b) heating the hydrosilylated polymer i) in an atmosphere of an inert gas and ii) at a temperature higher than the softening point or melting point thereof, preferably at a temperature of 50 to 250°C.

With respect to a), as mentioned previously, Zank discloses a molding material for making a molded article (col. 4, lines 15 and 26). Merriam-Webster defines the word “molding” as “an object produced by molding”, the verb “mold” as “to form in a mold” and the noun “mold” as “a cavity in which a substance is shaped” (page 749). The motivation of putting a substance in a mold cavity is to form a molding. In light of the benefit mentioned above, it would have been obvious to one of ordinary skill in the art at the time of the invention to produce Zank’s molded article (i.e., a molding) in a process comprising a step of putting Zank’s hydrosilylated polymer in a mold cavity.

With respect to b-i), it is well known that in a molding process, an inert atmosphere is applied to prevent the oxidation/degradation of the molding material. For example, Sun teaches that during molding a ultra high molecular weight polyethylene (UHMWPE) at elevated temperature, an inert atmosphere is applied in order to minimize oxidation (col. 5, lines 23-36). In light of which, it would have been obvious to one of ordinary skill in the art at the time of invention to perform the Zank’s molding process under an inert atmosphere in order to minimize oxidation. Should Applicants argue that Sun is a non-analogous art for the purpose of rejection, Applicants are referred to MPEP 2141.01(a) which states that a reference may be relied on as a basis for rejection of an applicant’s invention if it is “reasonably pertinent to the particular problem with which the inventor is concerned.” A reasonably pertinent reference is further described as one which “even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.” Therefore, although Zank is from different fields (i.e., UHMWPE, instead of polysiloxane) than that of the current

application, it discloses the application of inert atmosphere to minimize oxidation in a molding process, which is especially pertinent to the invention at hand.

With respect to b-ii), Ishida teaches that polysiloxanes are typically processed above their glass transition temperature (i.e., softening point) or above their melting point in a molding process. The motivation is to facilitate the molding process (col. 2, line 51 to col. 3, line 28). It is further noted that the temperature at which the polysiloxane is heated will affect how the polysiloxane flows in the mold. A proper flow of the polysiloxane is needed to ensure the cavity of the mold is adequately filled. In other words, the temperature at which the polysiloxane is heated is a result-effective variable. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, during the molding process, to heat Zank's hydrosilylated polymer above its softening point or above its melting point, and further through routine experimentation to use whatever heating temperature in order to obtain a proper flow of the hydrosilylated polymer in the mold, especially Applicants do not show the criticality of the heating temperature range of 50 to 250°C. See MPEP 2144.05 (II).

With respect to Claims 7 and 11, the difference between Zank and the present invention is the requirement of a step of molding under a reduced pressure.

It is well known that in a molding process, a reduced pressure is applied to remove the trapped air and/or moisture. For example, Sun teaches an UHMWPE molding process performed under a reduced pressure. The motivation is to eliminate air and moisture (col. 4, lines 50-59). In light of which, it would have been obvious to one of ordinary skill in the art at the time of invention to perform Zank's molding process under reduced pressure in order to remove trapped air and/or moisture. Should Applicants argue that Sun is a non-analogous art for the

purpose of rejection, Applicants are referred to MPEP 2141.01(a) which states that a reference may be relied on as a basis for rejection of an applicant's invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." Therefore, although Sun is from different fields (i.e., UHMWPE, instead of polysiloxane) than that of the current application, it discloses the application of reduced pressure to eliminate the trapped air and/or moisture in a molding process, which is especially pertinent to the invention at hand.

Response to Arguments

4. Applicant's arguments with respect to Claims 6-7 and 9-11 have been considered but are moot in view of the new ground(s) of rejection.

The rejection of the instant claims is described in the previous paragraph.

Allowable Subject Matter

5. Claims 12-21 are allowed.
6. The following is an examiner's statement of reasons for allowance:

The present claims are allowable over the closest reference: Zank.

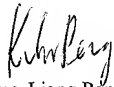
Zank does not teach or fairly suggest heating the polymer in the specific steps set forth in the instant claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (703) 306-5550. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan, can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

klp
December 12, 2003


Kuo-Liang Peng
Art Unit 1712